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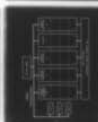
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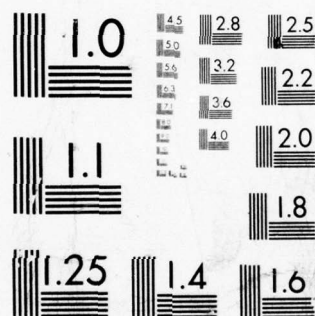
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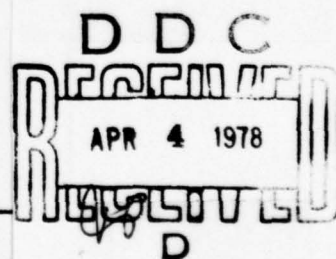


PROGRAM MANAGEMENT COURSE INDIVIDUAL STUDY PROGRAM

THE ACQUISITION / MANAGEMENT PROCESS
OF THE NAVY'S
COMMODITIES / SUBSYSTEMS PROGRAMS

STUDY PROJECT REPORT
PMC 77-2

Joseph J. Bonaiuto
GS-11 DNC



FORT BELVOIR, VIRGINIA 22060

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DEFENSE SYSTEMS MANAGEMENT COLLEGE

STUDY TITLE: THE ACQUISITION/MANAGEMENT PROCESS OF THE NAVY'S
COMMODITIES/SUBSYSTEMS PROGRAMS

STUDY PROJECT GOALS:

To define and gain understanding of the Acquisition Process associated with non-major programs. Identify the potential problem areas that exist in the current Acquisition Process and propose solutions/recommendations concerning those identified problem areas.

STUDY REPORT ABSTRACT:

The purpose of this report is to define the criteria by which non-major acquisitions programs are conducted within the Defense Industry and to summarize the current status of that process.

The project was conducted through informal interviews with acquisition personnel within NAVAIR and the Naval Ordnance Station, Indian Head, Md., and through research of the current documentation that applies to both the major and non-major acquisition process.

The results of the examination indicate that not much in the way of specific direction currently exists with regard to the acquisition and management of non-major systems within the Department of the Navy.

The author concludes that there is a need for such documentation and a formal review process similar to that established for major programs, and recommends that the Navy establish formal review guidelines and appropriate documentation to better define the process of acquisition for non-major systems.

The implications are that the Navy's acquisition process can be greatly enhanced by the improved lines of communication and cooperation resulting from such action.

SUBJECT DESCRIPTORS:

Systems Acquisition Management, Major Policies (10.02.01.00)

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THE ACQUISITION / MANAGEMENT PROCESS
OF THE NAVY'S
COMMODITIES / SUBSYSTEMS PROGRAMS

Individual Study Program
Study Project Report
Prepared as a Formal Report

Defense Systems Management College
Program Management Course
Class 77-2

by

Joseph J. Bonaiuto
GS-11 DNC

November 1977

Study Project Advisor
CDR Joseph Russell, SC, USN

This study project report represents the views, conclusions and recommendations of the author and does not necessarily reflect the official opinion of the Defense Systems Management College or the Department of Defense.

EXECUTIVE SUMMARY

The intent of this report is two fold. First, this paper represents the authors attempt at gaining a clear understanding of the acquisition and management process of non-major programs within the Department of the Navy, specifically, the Naval Air Systems Command. The main thrust of this report is aimed at attaining this understanding since it is directly related to the program environment within which the author will function. Second, this report will review the acquisition process of major programs as related to the process associated with non-major programs. This will be accomplished through a thorough examination and comparison of the governing documents pertaining to Defense Systems Acquisition.

From this point on the major emphasis will be placed on the examination and understanding of the non-major program acquisition process. Key issues will be identified and supporting case examples will be presented as part of the examination. From this, conclusions will be derived and recommendations made.

ACKNOWLEDGEMENTS

The author wishes to acknowledge the assistance provided by various officials and co-workers within the Naval Air Systems Command and the Naval Ordnance Station, Indian Head, Md., who were so generous with their time during the informal interview portion of this project.

My special thanks to the staff of the Forms and Publications Office at NAVAIR who provided a great deal of reference material in such a timely manner, and to the Study Project Advisor, CDR Joe Russell, whose assistance in preparing this project is greatly appreciated.

Finally, a most sincere thank you to my wife, Sylvia, whose patience and understanding helped make this project report possible.

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SECTION I

INTRODUCTION

Purpose of the Report

The basic purpose of this report is to define the criteria by which non-major acquisition programs are conducted for and by the Defense Industry. The acquisition process for major weapons systems is clearly defined and established throughout the defense environment. But what about the acquisition process for the programs and projects of lesser importance and dollar magnitude? In other words, where is the acquisition process for non-major weapons systems defined? What documentation specifically outlines this process for commodity items and subsystems acquired to support the major weapon system?

It has been estimated that each year the Department of Defense (DOD) obligates more than \$30 billion in funds for more than ten million contract and modification actions in support of National Defense objectives. Approximately ninety nine percent of these actions represent only \$12 billion in funds. In short, less than 1 percent of all Department of Defense procurement actions are for contracts of major weapons systems. However, these major contracts represent more than fifty percent of the total amount spent for defense procurement(4:14).¹

¹
This notation will be used throughout the report for sources of quotations and major references. The first number is the source listed in the bibliography. The second number is the page in the reference.

If then, one can assume that the major portion of time is spent managing programs of lesser magnitude than major weapons systems, a reasonable assumption is that there must be a great deal of literature available in the form of DOD and Service Directives that specifically define the acquisition and management process of non-major programs. It is this underlying assumption that will be investigated in the course of this report.

Historical Background

As a method of bringing the reader up to date on the current strategy of weapons systems acquisition, it is necessary to review the related policies of past Administrations. As with other areas within each new Administration, the Defense Department frequently undergoes policy changes. Periodically, policy is examined and changed accordingly. The policy of procuring this country's defense is no exception.

When Robert S. McNamara, during the Johnson Administration of the sixties, was the DOD Chief Executive, the major defense systems acquisition process was considerably different than that of today. McNamara conducted the acquisition process in a very centralized manner which left many program managers in doubt as to where actual program responsibility resided. Accountability for the success or failure of these programs was vague and the resulting relationship between the Services and the Office of the Secretary of Defense(OSD) can best be described as cloudy and confusing(9:20).

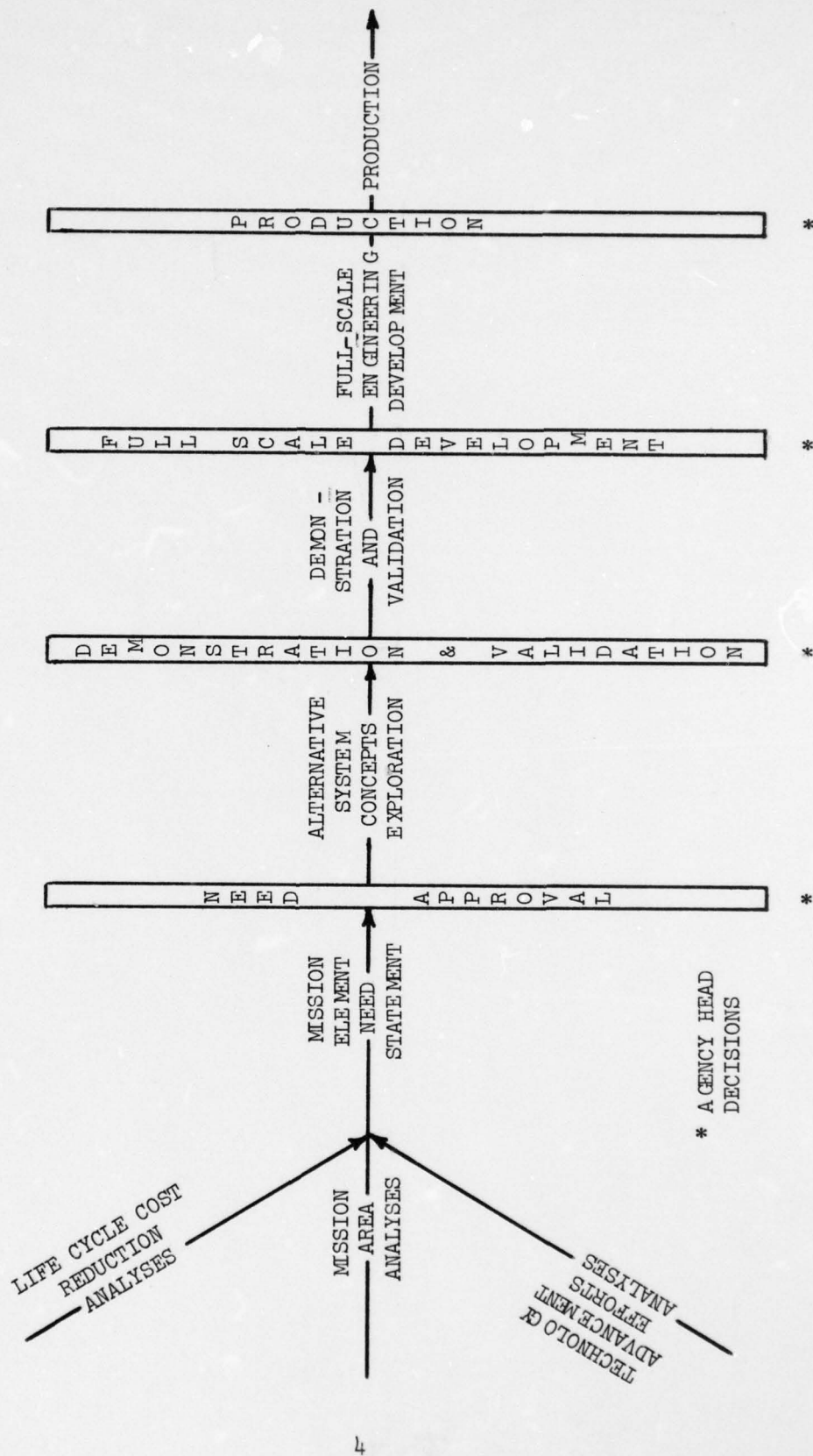
This is not to say, however, that nothing of worth came out of DOD while McNamara was Chief Executive. Quite the opposite in fact, is true for one of the greatest of McNamara's contributions to the Defense acquisition process was the development and implementation of the Planning, Programming, and Budgeting System (PPBS) which is still in use and highly praised.

However, due to the defense funding policies of McNamara and his successor, Clark Clifford, the relations between OSD and Congress were considered anything but smooth (6:5).

When Mr. Laird, with his new Deputy, David Packard, came to office, much time was spent on re-establishing effective communication with Congress. It was during this time period that Mr. Packard directed his attention toward improving the acquisition process of weapons systems. The first step toward this came in May of 1969 with the establishment of the Defense System Acquisition Review Council (DSARC). The primary responsibility of the DSARC was to advise OSD by providing information and recommendations concerning programs that required OSD level decisions. DSARC program decision points were established as indicated in Figure I. In addition this procedure would provide OSD with a program tracking mechanism by monitoring program progress at predetermined points throughout the acquisition process (6:6).

Mr. Laird and Mr. Packard now turned their attentions toward properly establishing the responsibility, authority, and accountability levels of programs through the process of de-centralizing the OSD program management policy. Their approach was a participative management policy between OSD and the Services. On 13 July 1971 Mr. Packard

FIGURE 1. LIFE CYCLE OF MAJOR SYSTEM ACQUISITIONS



signed DOD Directive 5000.1, Acquisition of Major Defense Systems.

This document directed that the Services would establish the need for weapons systems and be responsible for their procurement. In addition, the directive established the necessary lines of program authority and accountability between OSD and the Program Office by outlining the Service and OSD responsibilities necessary to obtain successful program completion. Needless to say, the policy provisions of DOD Directive 5000.1 were readily and widely accepted by the Services and implementation began almost immediately.

SECTION II

PRESENT ACQUISITION STRATEGY

Background

With the ground work laid by Mr. Laird and Mr. Packard, the Program Manager's future environment would appear to have improved considerably. While the policies surrounding the procurement of weapons systems may have improved, the environment remained substantially unchanged primarily because of the prevailing public attitudes which surrounded the environment. The unfavorable attitudes that surrounded the acquisition of military systems during the late sixties and early seventies have not yet been overcome. During this period the general public became greatly disenchanted with the Defense environment primarily due to the Southeast Asia conflict and the greatly publicized cost overruns associated with the F-111, C5-A, and F-14 programs. With regard to this, the defense industry in general has recognized that these attitudes are not only real but will probably remain with us throughout the seventies (1).

Recently the trend has been to re-establish public confidence and improve overall efficiency in the defense acquisition management process.

In an attempt to maintain this trend, Deputy Secretary of Defense William P. Clements conducted a study of independent reviews of the

DOD acquisition procedures and determined that the communications between Program Managers and OSD top level management were unsatisfactory. On 13 September 1975, Mr. Clements initiated a new reporting procedure that required Program Managers of major programs to report directly to OSD on a monthly basis regarding the status of their programs. Aside from becoming directly involved with the programs, it was Mr. Clements' desire to be able to provide constructive guidance in keeping programs on track. It was in this spirit that Mr. Clements signed the revised DOD Directive 5000.1, Major Systems Acquisition, on 18 January 1977.

DOD Directive 5000.1 appears to be the heart of the acquisition process for the Defense Department. As such, it deserves considerable attention and close examination. The Directive makes it clear that the Services are to establish the need for systems that are to be considered as major weapons systems. Almost immediately the Directive defines major systems acquisition programs as those "involving an anticipated cost of \$75 million in research, development, test and evaluation (RDT&E) or \$300 million in production" (2:2). The Services will have the responsibility of appointing a program manager who will be responsible for the conduct of the program. The program manager is to be given an approved charter which states "the program manager's responsibility, authority and accountability for program objectives" (2:5). OSD is to establish and implement policy, and verify the system need. In addition, through the DSARC process

and the Decision Coordinating Paper (DCP), OSD is to monitor the progress of subject programs. These monitoring or decision points are designated as program milestones and are defined as follows:

Milestone 0 - Program Initiation. At this point "the considerations to support the determination of the mission need" are documented in the Mission Element Need Statement (MENS).

Milestone 1 - Demonstration and Validation, where the DOD component head recommendations are documented in the DCP.

Milestone 11 - Full Scale Engineering Development (FSED), where upon successful completion of the Demonstration and Validation Phase approval is sought to enter FSED. Approval is sought from OSD based on the updated DCP.

Milestone 111 - Production and Deployment, where again OSD approval is sought through the updated DCP.

Finally, the Directive requires the program manager to consider contract actions, resource allocations, cost, schedule, and technical performance requirements, production planning engineering and industrial preparedness planning, test and evaluation, logistic

support, and a host of other equally important considerations (2:8).

The Directive contains two additional statements that will prove relative to the scope of this report. The first statement centers around programs that are not designated as major systems acquisitions and indicates that those programs will be "guided" by the provisions of the Directive. The second directs the Services to provide implementing regulations of the Directive to the Defense Acquisition Executive within a prescribed period of time. In effect, the Directive is directing the Services to write their implementing instructions in such a way so as to include provisions for non-major programs.

Similarly, DOD Instruction 5000.2, The Decision Coordinating Paper (DCP) and the Defense Systems Acquisition Review Council (DSARC), of 18 January 1977, while expanding the concepts presented in DOD Directive 5000.1, also defines its purpose to be concerned with "the decision making process at the Secretary or Deputy Secretary of Defense level on major defense system acquisition programs" (3:1).

Key Issues

The DOD Directive 5000.1 of January 18, 1977 clearly establishes the current policy for the acquisition of major weapon systems. The current version, in its briefness and simplicity illustrates one of its major intents, that is, it encourages decentralization. In accordance with its direction, each DOD component head issues its implementing instructions which set forth the necessary procedures for the acquisition of weapon systems. For the Department of the Navy, the governing document is SECNAVINST 5000.1, System Acquisition in the Department of the Navy. Primarily, this document establishes the policy and management principles for acquisitions of systems within the Department of the Navy.

However, upon review of the documentation that governs the acquisition process within the Naval Air Systems Command (NAVAIR), the following key issues have been identified.

1. No specific instructions appear to have been established within the Department of the Navy with regard to the acquisition and management process of less than major programs.
2. No apparent requirement for formal reviews of the DSARC type exists at any level within the Department of the Navy for less than major programs.

With respect to the first key issue, some explanation of the Navy's

system acquisition cycle is required. While the SECNAVINST 5000.1 is considerably more detailed than DOD Directive 5000.1, the basic structure of each is the same. The primary difference lies in the level of review authority for the different type programs involved. For programs of less than major importance review rests with the Chief of Naval Operations (CNO). Much of this review and approval authority is delegated to the Chief of Naval Material (CNM) who in turn delegates it to the Systems Commands. This process is illustrated by Figure 2. It should be noted at this point that the basic structure of the Navy Department, as well as some of its acquisition policies, are slightly different from that of the other Services as shown in Figure 3.

The governing Navy document devotes one paragraph to the Acquisition Management of other than Major Defense Systems and reads as follows:

"Acquisition Management is concerned with those acquisitions which are, in most instances, for GFE (Government Furnished Equipment) to be supplied as subsystems or components to major acquisition programs or items under laboratory development. Such acquisitions fall below the threshold requiring OSD level monitorship and do not require the degree of visibility and status accorded Project Management. Approval and monitorship for these acquisitions will be accomplished as an integral part of the overall Navy Department system acquisition process. Acquisition Managers are responsible for development, production and initial support of hardware items. Accordingly, appropriate command support and apportioned resources shall be provided to the acquisition management function.

1. Specific Authority. Specific authorities of Acquisition Managers of the SYSCOMs and Bureaus (includes field activities) and NAVMAT laboratories (e.g., Naval Ordnance Laboratory, Naval Ship Research and Development Center, etc.) are contained in appropriate organizational functional statements.

FIGURE 2. CHIEF OF NAVAL MATERIAL DESIGNATED PROJECT

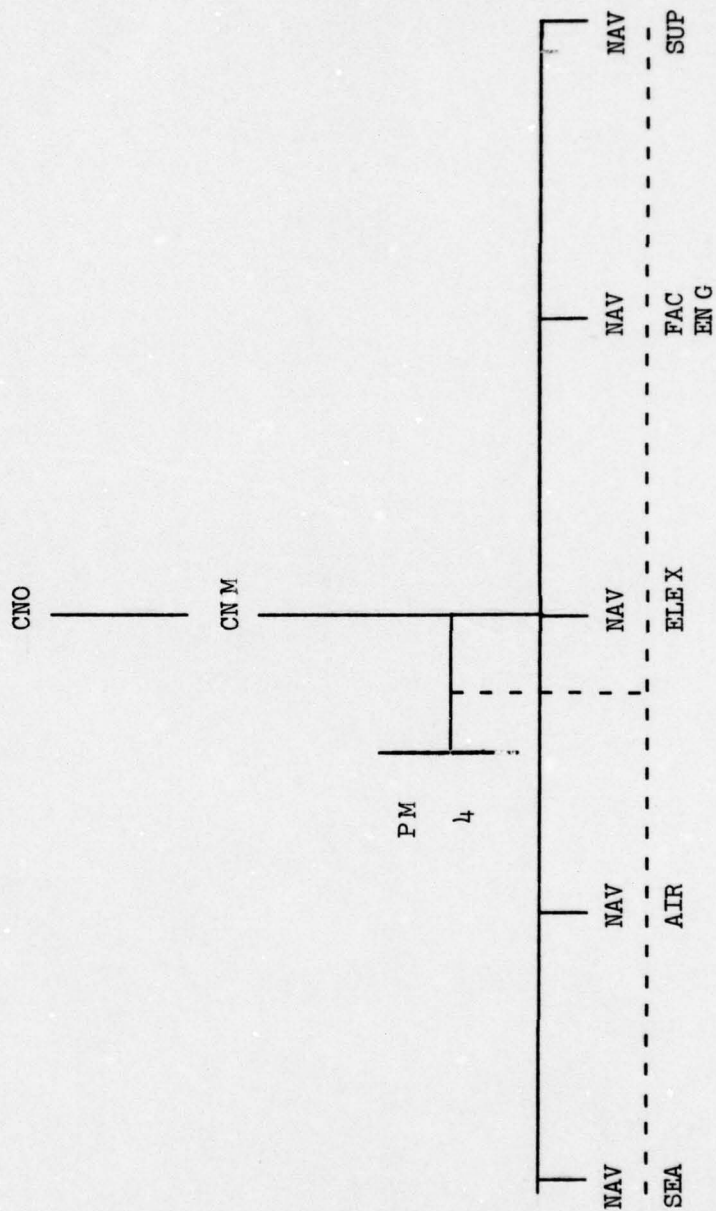
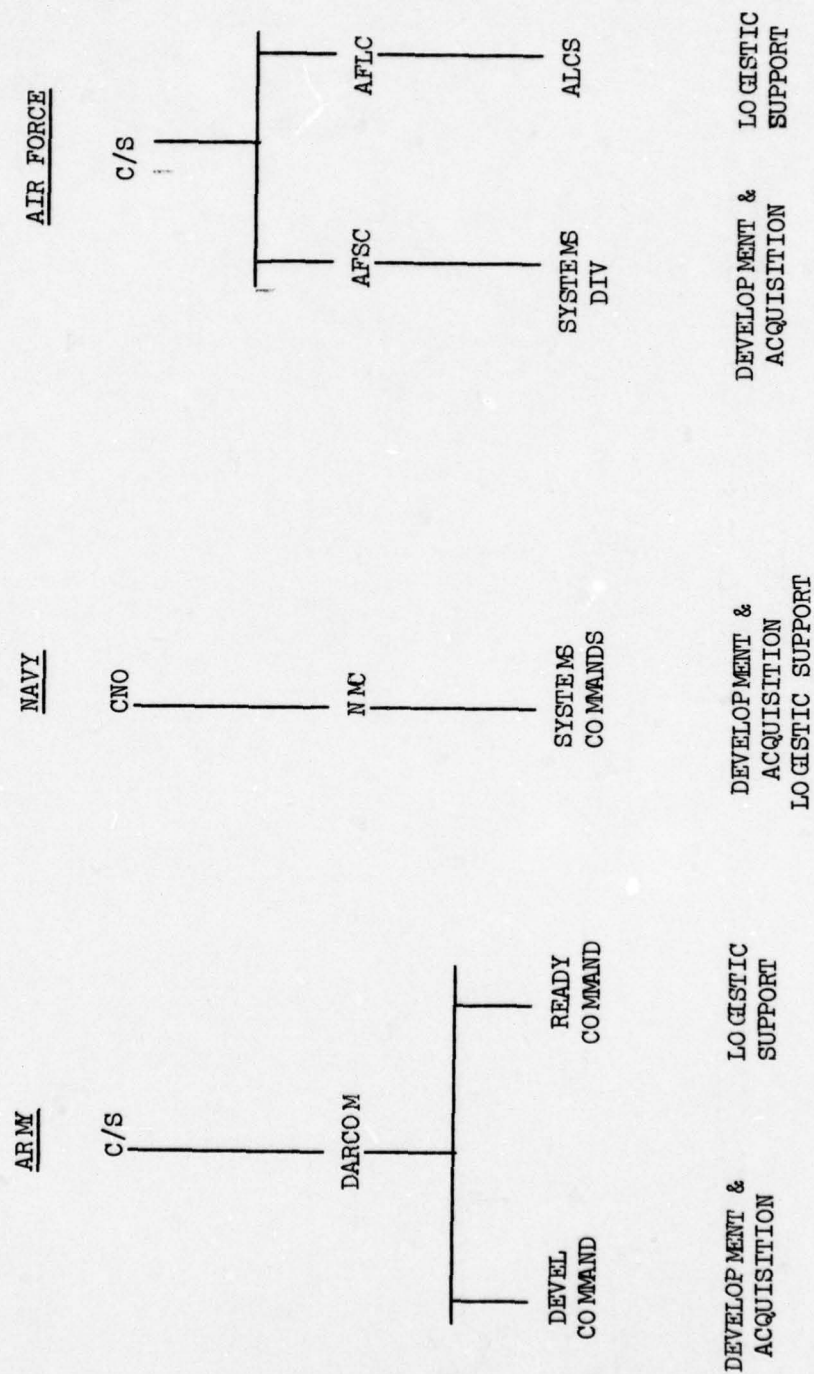


FIGURE 3. MATERIAL ORGANIZATIONS



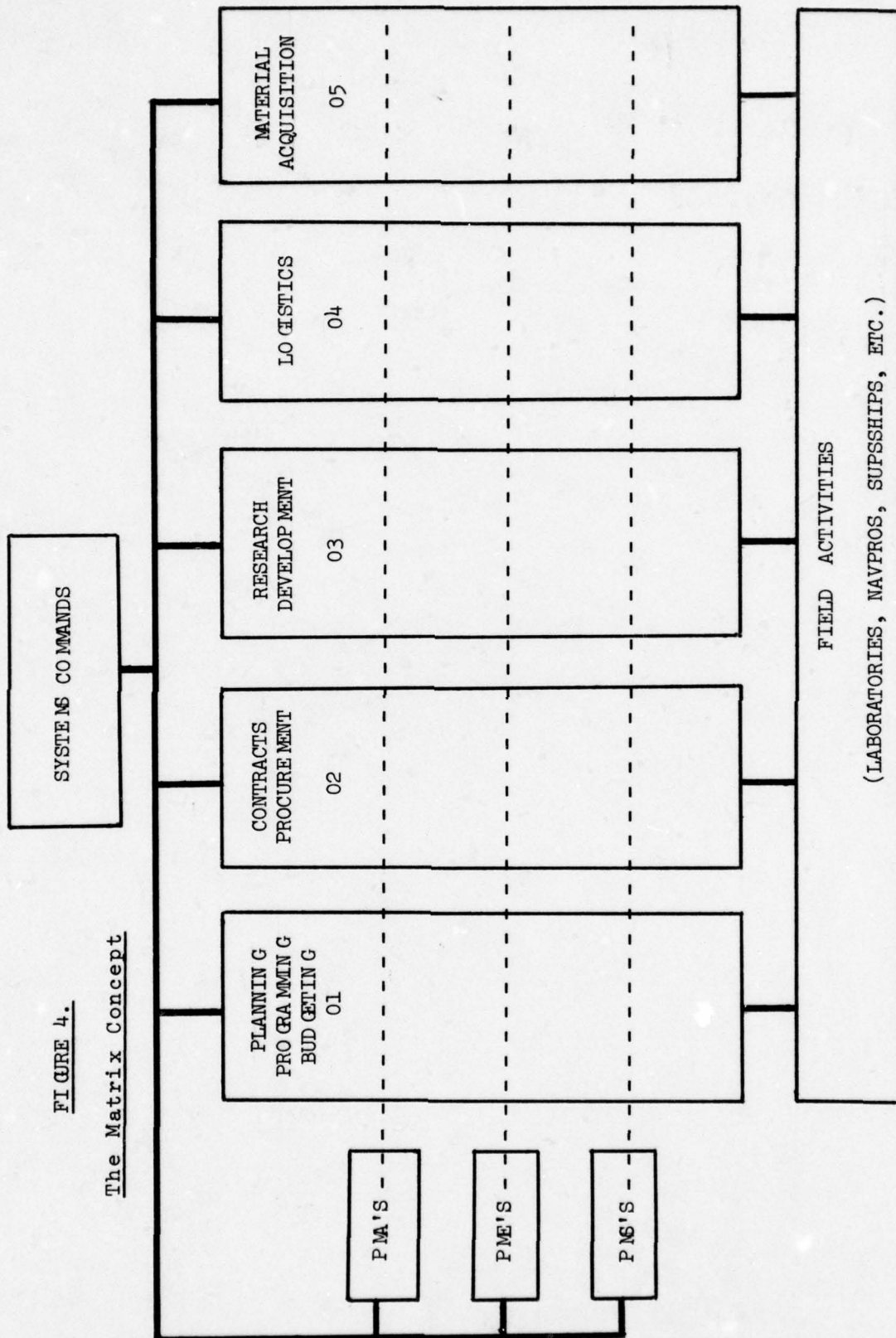
2. Specific Responsibilities. Acquisition Managers, SYSCOM or Bureau and laboratory functional personnel operate within approved work task statements, project directives, specified tasks, schedules and financial ceilings."

In essence, the functional managers within NAVAIR are responsible for programs of less than major proportions.

Here in lies the basis for the second key issue. Less than major programs are generally managed and most often reviewed within the functional divisions of NAVAIR. For the most part this is true until continued financial support is required. When such support is required a review outside the functional areas of responsibility is conducted. Very often this review is the only contact the Program Manager has with such programs.

Figure 4 illustrates the matrix concept of management employed by the Navy Systems Commands. The concept is good enough in principle but occasionally is in need of fortification in the area of practical application.

This is not to imply that non-major programs are not managed effectively, for just the opposite is true. Generally speaking the functional organizations within NAVAIR manage their programs very efficiently. In many cases however, the functional organization is handling programs of two basic categories; the program that really has no immediate association or visibility with a major program, such as that of the F-18 aircraft, and programs that directly interface with major programs. The program manager for a major program of this type



may not be over excited about the development of a new component for an existing subsystem that may or may not eventually be utilized in his aircraft, but will be very concerned if the same subsystem is being developed for his aircraft. The point to be made here is not the immediate concern of the program manager but that the functional manager is performing the same level of effort for both systems. His level of concern will include all normal program functions associated with the acquisition of the subsystem. When information is needed by the Program Office he will supply it and then return to his normal duties of managing the subsystem. The problem that exists in this type of environment is that the lack of communication and effective subsystem review between the functional and program manager levels can cause some problems not to surface in time to prevent the occurrence of more serious problems.

Communication problems of this nature do occur and are not infrequent to functional organizations. Often a program office will procure a system without consulting functional organizations who may be responsible for subsystem components that are part of the overall system. Most often this occurs as a change to an existing major system and rarely during the actual acquisition of the major system. None-the-less, the possibility exists for this type of occurrence and when it happens the functional manager usually learns of it only after a problem arises in that component. At that point the functional manager may find that because the program office has procured an

unapproved component, actual cognizance of the item is difficult to determine.

In an effort to clarify the theory presented above, the next section of the report will focus on the presentation of specific case examples associated with problems of this nature.

SECTION III

CASE EXAMPLES

General Discussion

The examples cited in this section are presented as a method of substantiating the key issues that were identified in Section II. The cases are current and on-going within the Naval Air Systems Command. For the most part the examples reside in the 05 side of Navair (AIR 532) with interface in various other areas. Three examples will be presented and discussed in detail. The problems are primarily the concern of the Armament Division (AIR532) with interface relationships with the Airframe Division (AIR 530), the Rotary Wing Aircraft Office (AIR 5104), the Carrier Based Aircraft Office (AIR 5102), and various Program Offices which includes the F-14 Program Office.

Case 1 : The UH-1N Aircraft/rescue Hoist Blunder.

Toward the end of 1975 the prime contractor for the Navy's UH-1N helicopter, together with the NAVAIR program office, identified a necessary change to the aircraft's rescue hoist system. The change involved replacing the existing hoist assembly with a redesigned unit assembly. An engineering change proposal (ECP) was written and

approved and funds were provided to achieve performance of the work required. Upon completion of the work the first units were shipped to the UH-1N user squadron, based in California, for installation.

The rescue hoist employs an explosive Cartridge Actuated Device (CAD) in the form of a cable cutting guillotine assembly whose function is to sever the 3/8 inch diameter steel cable in emergency situations. Normally devices of this nature are under the cognizance of AIR 532. By Navy regulations devices of this type require periodic inspection and replacement of the explosive cartridge contained in the device. In cases of new installation, a requirement is made to enter specific information, pertaining to the cartridge, in the aircraft log entry book (5:xviii).

Upon completion of the hoist installation, the user attempted to comply with the requirement directing him to enter cartridge information in the appropriate log book. At this point, almost two years from its beginning, the problem surfaced. When the user found no information on the cartridge he called AIR 532 for assistance and guidance. AIR 532 could find no reference to the installed device and a rather lengthy investigation was begun. The investigation revealed the following:

1. the explosive device had not been approved for service use and was therefore, unauthorized for Fleet application. In addition, safety considerations required that the device be replaced or qualified for service use to avoid discontinuance of the hoist assembly or grounding of the affected aircraft.
2. the ECP generated by the contractor and approved by the Program Office was not properly reviewed within NAVAIR. Existence of the ECP was not known to AIR 532 until after the problem surfaced. Adequate review therefore, was not provided and a serious problem arose.

As a result, two courses of action were open to the Program Office and AIR 532. First, replace the unauthorized equipment with an approved device. This action required another ECP because structural changes were necessary in order for the hoist to be matched with any of the available approved guillotines. Second, perform the required qualification testing on the existing device in order to obtain approval for service use. The second approach proved to be the most practical, but still costly to the Program Office. The qualification program would involve the best part of seven months including the time required for parts procure-

ment, test setup, and documentation preparation. During this time the three aircraft that had been fitted with the new hoist assembly did not fly.

An effective line of communication between the Program Office and functional levels of responsibility together with a proper process of review of the contractor ECP could have alleviated the added cost and associated problems to everyone concerned. As a result, the installation process of the new hoist assemblies is still taking place.

Case 2 : The MK 124 MOD 0 Impulse Cartridge

The MK 124 came about in the early seventies in an effort to cure some of the Navy's more serious problems associated with stores ejection and release from aircraft. This impulse cartridge was intended to replace several of a series of other cartridges that were being used by the Navy for stores release in a host of bomb racks and missile launchers. The experimental cartridges produced in the early seventies proved efficient and reliable for their intended applications. In addition to the existing applications, as promising as it appeared, the MK 124 was designated for use in the F-14 Sparrow Missile launcher which was still under development during this time period. The experimental cartridge, through the usual qualification

procedures, was accepted and approved for its intended application. Today the cartridge is used in virtually every bomb rack and launcher system currently employed by the Navy. Eventually though, several severe problems became apparent concerning the MK 124 cartridge and a constant effort has been underway since in order to improve the situation.

The most severe of these problems centered around the cartridges application in the F-14 launcher, and this problem is not likely to disappear any time in the near future. The implications of the F-14/MK 124 problem are far reaching and involve a multitude of individuals and organizations. AIR 532 has cognizance over the impulse cartridge, and as such, has been directly involved with the F-14 Program Office and the contractors associated with the aircraft and launcher systems.

The problem identified itself initially during actual application of ejecting the missiles from the aircraft, but it was the contractor who actually brought the problem to light in its current proportions.

Early in 1974 the contractor reported difficulty in testing the launcher for acceptance. Concern was expressed that the new cartridges were not capable of developing sufficient energy to release the missile with

sufficient force. What followed was two years of extensive testing, reporting, attending meetings, checking various test procedures, reviewing documentation and reviewing the designs of both the cartridge and the launcher system. To date, no satisfactory solution has been reached.

Initially the Government took the position that it must have been a problem peculiar to the launcher because the cartridges were manufactured to close tolerances as specified in the appropriate specifications. In addition, these particular cartridges were certified approved as a result of the usual pre-production lot acceptance test procedures and the Defense Contract Administration Service (DCAS) inspection procedures. The contractor immediately went to work to prove the Government wrong and reported that they had discovered a large quantity of the cartridges to be grossly out of compliance with the specification.

An investigation was conducted by the government that consisted of examining the entire lot of cartridges by hand inspection.

All ten thousand cartridges were screened for weight and dimension characteristics and then x-rayed. The result proved somewhat astounding to the government personnel involved. The results indicated that over seventy percent of the lot was defective and indeed grossly out of specification requirements. During the investigation, for

instance, four cartridges were found not to contain any main propellant charge what-so-ever.

While the discovery of this deficiency did not solve the initial problem, serious consequences did result in that the relationship between government and contractor was severely hampered. As a result, a great deal of valuable time has been consumed just trying to re-establish meaningful communication and an atmosphere of trust and confidence.

It is clear that the Program Office and the functional office dropped the ball so-to-speak in allowing the occurrence of the above incident. Proper DCAS and Program Office monitoring procedures combined with frequent program reviews could have avoided this problem and saved hundreds of thousands of extra dollars from being waisted.

Case 3 : The MK 131 MOD 0 Impulse Cartridge

The MK 131 MOD 0 impulse cartridge dates back to the early sixties. Development of this cartridge was sole source and intended for only one purpose; to dispense and deploy chaff countermeasures weapons. During this period of time the decision was made by the Bureau of Weapons (BUWEPS) to make use of this cartridge for dispensing the MK 46 Decoy Flare, which served a similar function as that of the chaff unit but in a considerably different manner.

The two stores are similar in weight and size and are dispensed from the same ejection dispenser, and here the similarity stops. Beyond these physical characteristic similarities the two stores are very different. It is not necessary to explain the differences in this report but only explain that once the BUWEPS decision was made both stores relied on the MK 131 cartridge for ejection. Up to this point there were no problems - both stores ejected as required and functioned normally as intended.

Eventually though, the flare became the most used item of the two stores - the driving factor - and as with any other successful item a change was deemed appropriate. Changes were made to the flare, slight alterations actually, to improve performance characteristics and enhance it's design objective. Subsequently, however, someone noticed a slight incompatibility between the cartridge and the two stores. It became obvious that the cartridge no longer functioned normally with both stores but only with the flare. Recently it was learned, through personal contact with the sole source vendor, that the cartridge also had been altered to be compatible with the flare, the driving factor. Although no written documentation exists to bear out this statement, the fact is that the main charge in the cartridge was increased to provide sufficient energy to properly operate the flare as a result of flare improvements. It must be stated here and now that actually nothing devious was intended. BUWEPS personnell directed these decisions and the vendor increased the propellant charge weight within the limits

specified in the governing specification. The point being made here is that the decisions that were made do not appear to have been well thought through.

The resulting problem associated with the chaff rounds became more serious as time passed. The chaff would fail to function and in many cases the fragile plastic tube housing would explode instead of ejecting. The problems were addressed repeatedly and eventually the decision was made within NAVAIR (by the same BUWEPS people) to develop a new cartridge for the chaff round. The new cartridge was developed and produced by another sole source vendor and while tested and approved by the government did not solve the problem entirely. In fact, the new cartridge caused an array of new problems. Since both stores are expended from the same series of dispensers, the two cartridges must both operate from the same series of dispensers. Hence, the two cartridges are almost identical in physical size and dimensional characteristics. It is therefore easy to load the wrong cartridge with the wrong store, particularly when the dispenser is to carry a mixed load of flares and chaff. In other words a logistics nightmare began to take shape. In addition, inventory management of the cartridges eventually became a serious problem. Government activities were no longer sure what they had on hand, and physical counting of inventories involved too much time. By the end of 1976 three different stock numbers had been assigned to the two cartridges.

During 1976 AIR 532 conducted a test program that endeavored to

prove one cartridge effective for all associated stores, which now included the T-1219 Electronic Frequency Jammer. By Navy request, the second vendor produced yet another cartridge that was intended to function all three stores successfully. By the end of the year one hundred thousand dollars had been spent and the third cartridge proved to be no better than the other two.

The logistics problems intensified also. In March 1976 the Inventory Control Point (ICP) for devices of this nature reported the MK 131 cartridge to be in critical short supply - none existed within the Navy except a trace amount. The cartridges used to perform the AIR 532 program during 1976 were purchased from an Army ammunition depot in Korea. However, when it was time to establish the 1978 procurement buy in mid 1977, the ICP reported almost one million MK 131 impulse cartridges on hand in the United States. The most interesting aspect of this estimate is that no MK 131 cartridges had been produced since 1974. Based on this fact the ICP conducted three more estimates of on hand MK 131's. Three grossly different estimates resulted, the last of which was in the neighborhood of three hundred thousand.

Currently, AIR 532 is taking a new look at the situation surrounding this problem. The approach will be to study the problem from a systems approach - that is, to view the problem with respect to all equipments (stores, cartridges, and all different dispensers), not just separate components. It is this authors opinion that the technical incompatibilities and logistic nightmares which surround this problem are inexcusable.

SECTION IV

SUMMARY

COMMENTS

This report illustrates the fact that the environment of Defense Systems Acquisitions is indeed constantly changing. Nowhere in this report is the need for such a change disputed, for to resist such change is to become archaic and narrow minded in concept. Surely the Defense Industry has managed to stay atuned with the changes necessary to the successful management of it's major system acquisitions. However, it would appear that Defense Industry has neglected, to some extent, the management practices associated with the programs of less than major importance. While probably not true in all cases, a large number of non-major programs within the Department of the Navy are being run by functional level managers who take the attitude of "we've always run things this way." This approach is no longer valid. The case examples cited in this report exemplify this to be true. The correct and proper management of subsystem programs is every bit as important as that of major programs because of the potential adverse impacts that can result. For the Navy to manage it's subsystem programs with any less care and professionalism than that devoted to major programs is to breed management obsolescence.

Conclusions

With the issuance of SECNAVINST 5000.1 the Department of the Navy satisfied the requirement as stipulated in the DOD Directive 5000.1 with regard to the management and acquisition policies of major systems. Beyond this, the Navy appears to direct little attention to the management and acquisition of non-major systems. The author was unable to locate any Navy directives, instructions, or publications which dealt explicitly with proper management and acquisition policies and procedures for less than major systems. From this the author concludes that "somehow" it all works. It may not work smoothly - but it works.

The decision making process for non-major programs is often haphazard and inadequate. Frequently, decisions of this nature are bounced back and forth between program offices and function offices within NAVAIR. Very often decisions concerning a weapon systems are bounced back and forth among different divisions within NAVAIR because several divisions have cognizance over pieces of the system and clear boundaries of ownership are not well established. This is true in the case 3 example of this report. AIR 532 has cognizance over the flare and the cartridge while the Electronic Warfare division (AIR 533) has cognizance over the Jammer and just recently farmed the chaff round out to one of it's field stations. In the past two years neither of these divisions has admitted to this author the "owner ship" of any of the dispensers. At the beginning of 1977 the Program office

for this system was individually funding no less than six government activities for research and development for different pieces of the system and at least three private contractors for further development and procurement of the same pieces of the system. For the most part, all were working independantly of the other. In short, the effect of bouncing back and forth of cognizant responsibility in this manner is most dollar and time-consuming and never makes a program run smoothly.

Review and monitoring procedures for programs of this type are often conducted in the same manner.

SECNAVINST 5420.172B, Establishment of the Department of the Navy Systems Acquisition Review Council (DNSARC), of 18 May 1976, appears to be the only existing Navy document that deals with the administrative procedures governing program reviews. "The mission of the DNSARC is to provide a formal mechanism by which the secretary of the Navy will receive the advice and counsel of his principle advisors prior to making decisions concerning need, program initiation, continuation of, or substantial change to, systems acquisition programs which merit Secretarial attention" (8:1). The balance of this document defines the specific functions and procedures of the DNSARC.

Obviously, the DNSARC is concerned with reviews of major programs and the author is not advocating that the DNSARC expand it's realm of responsibilities to include non-major programs - only that the Navy address specific consideration of these programs.

Recommendations

In preparing the recommendations which follow, the author recognizes his limited experience in the Defense Acquisition business and the limited time afforded in which preparation and research of this report were conducted. None-the-less, with regard to the acquisition and management process of the Navy's less than major programs, the author also recognizes a definite need for improvement.

To begin with, there is every indication that there is a need for the Department of the Navy to establish and implement specific documentation, in whatever form necessary, to deal with the acquisition and management policies and procedures applicable to non-major systems. Effective guidelines and definitions should be developed to ensure effective communication and cooperation throughout all levels of management within the Department of the Navy. Definite lines of authority, responsibility, and accountability are essential to non-major programs, and once established will greatly enhance the operational effectiveness of major programs.

There is also a definite need to establish a fixed mechanism for which less than major programs can be monitored and reviewed. The functions and procedures spelled out in SECNAVINST 5420.172B can easily be applied to non-major programs. An organization of the DNSARC type could be established within each Navy Systems Command to perform these functions for non-major programs. Predetermined and frequent reviews will aid immensely in their timely interface with major programs and ensure a smoother flow

of both. Well defined monitoring and review procedures of non-major programs should be considered just as important as those procedures for major programs. The establishment and implementation of such procedures can only enhance the Navy's management ability.

A final recommendation: For the past year AIR 532 has been undergoing a sometimes dramatic reorganization effort. The main thrust of this effort has been to establish AIR 532 as a Program Office for the NAVAIR's armament systems. It has been a difficult attempt at reorganization to say the least, but AIR 532 recognizes it's strengths and weaknesses and is striving toward better management capabilities. It is therefore recommended that a direct line of communication be established between AIR 532 and the Defense Systems Management College (DSMC) to assist in obtaining an effective Armament Program Office within NAVAIR. It is further recommended that NAVAIR view this reorganization effort as a pilot program in obtaining effective program management to achieve more efficient fleet support.

SECTION V

ADDITIONAL AREAS OF STUDY

The subject of non-major acquisition programs within the Defense environment is one which lends itself to many additional areas of study. The areas covered in this report represent a small portion of subjects open to study and in themselves open areas of consideration subject to deeper analysis.

In addition to investigating the means by which the recommendations in this report might be realized, one might consider the following:

- * Design to Cost considerations for non-major programs
- * Who insures Reliability and Maintainability (R&M) requirements for subsystem programs?
- * The Armed Services Procurement Regulation (ASPR) and how non-major programs are really procured
- * Non-major and major program interfaces: problems and responsibilities

and for the next AIR 532 representative to attend DSMC, a suggested study project topic:

- * How to achieve and implement the objective that is presented as the final recommendation of this report.

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